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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/625,091

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Takahiro Takemoto

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KATTEN MUCHIN ROSENMAN LLP
575 MADISON AVENUE
NEW YORK, NY 10022-2585

EXAMINER

PHAM, TAMMY T

ART UNIT

PAPER NUMBER

2629

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DELIVERY MODE

03/05/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/625,091	Applicant(s) TAKEMOTO, TAKAHIRO	
	Examiner Tammy Pham	Art Unit 2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/11/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-6,8-11,13-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) 4-6,8-10,14-16,18-20 and 22-24 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,11,13 and 21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. Claims 2, 7, 12, 17, have been cancelled. Claims 4-6, 8-10, 14-16, 18-20, 22-24, have been withdrawn. Claims 1, 3, 11, 13, 21, are pending.

Election/Restrictions

2. Claims 4-6, 8-10, 14-16, 18-20, 22-24, has been withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Species II, as illustrated in Fig. 11, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11 December 2007.

Response to Arguments

3. Applicant's arguments, see Remarks, filed 24 May 2007, with respect to the rejection(s) of claim(s) 1, 3-6, 8-11, 13-16 under 103(a) as being unpatentable over Furuya (U.S. Patent Publication No: 2004/0104881) is invalid since Furuya has the same filing date as the current application, have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 3, 11, 13, ~~15~~, rejected under 35 U.S.C. 102(b) as being anticipated by

Moriyama et al. (US Patent No: 6,232,945 B1).

5. **In regards to independent claims 1, 11,** Moriyama teaches of an active-matrix addressing LCD device (Fig. 1, item 501) comprising: a panel including an active-matrix substrate (Fig. 1, item 101), an opposite substrate (Fig. 1, item 101), and a liquid crystal layer (Fig. 1, item 151) sandwiched by the active-matrix substrate (Fig. 1, item 101) and the opposite substrate (Fig. 1, item 101), the active-matrix substrate (Fig. 1, item 101) having data lines (Fig. 1, item X1-Xm), scanning lines (Fig. 1, item Y1-Yn) that intersect with the data lines (Fig. 1, item X1-Xm) at intersections, pixels (Fig. 1, item 151) arranged near the respective intersections, and TFTs (Fig. 1, item 121) arranged as switching elements (Fig. 1, item 121) for the respective pixels (Fig. 1, item 151) a source driver circuit (Fig. 1, item 291) for driving the data lines (Fig. 1, item X1-Xm); a gate driver circuit (Fig. 1, item 293) for driving the scanning lines (Fig. 1, item Y1—n); and a controller circuit (not shown) for controlling the source driver (Fig. 1, item 101) and the gate driver (Fig. 1, item 293), wherein a polarity of a data voltage (Fig. 18, item “Video Signal”) applied to each of the pixels (Fig. 1, item 151) by way of a corresponding one of the data lines (Fig. 1, item X1-Xm) and a corresponding one of the TFTs (Fig. 1, item 121) is inverted in every set of two or more horizontal synchronizing periods (Fig. 18, note that the “Video Signal” is inverted in at least every third horizontal synchronizing period) by the controller circuit (not shown); wherein the source driver (Fig. 1, item 291; Fig. 2) has a resetting means (Fig. 2) for resetting the data voltages outputted by the source driver circuit (Fig. 1, item 291; Fig. 2) in a blanking period (Fig. 18, when the Reset Signal is ON) of each of the horizontal

synchronizing periods (Fig. 18, item "Horizontal Blanking Period") of the set; and wherein the resetting means (Fig. 2) performs its resetting operation (Fig. 2) with reference to a latch signal (Fig. 2, item "Reset") supplied to the source driver circuit (Fig. 1, item 291; Fig. 2) by the controller circuit (not shown; column 6, lines 45-50; column 16, lines 45-50).

6. In regards to claims 3, 13, Moriyama teaches that each of the data voltages (Fig. 18, item "Video Signal") alternately has a positive value or a negative value in the polarity inversion period; and wherein the resetting means (Fig. 2) is controlled in such a way that each of the data voltages (Fig. 18, item "Video Signal") will reach a middle point value between the positive value (Fig. 18, positive value of "Video Signal") and the negative value (Fig. 18, negative value of "Video Signal") after the resetting operation (Fig. 2; Fig. 18, when the "Reset" pulse is ON) is completed (Fig. 18, column 16, lines 45-50).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Moriyama et al. (US Patent No: 6,232,945 B1) in view of Hirobumi (Japanese Publication No: 2001-249643).

8. **In regards to independent claim 21**, in addition to the claim limitations as taught by claims 1 and 11 above, Moriyama further teaches that the polarity of the data voltages (Fig. 18, item “Video Signal”) supplied by way of the data lines (Fig. 2, items X1-Xm) is alternately inverted in every set of the horizontal synchronizing periods (Fig. 18, item “One Horizontal Scanning Period”) and in every vertical synchronizing period (Fig. 21, item “Vertical Scanning Period”) within every frame period (column 19, lines 10-15), thereby driving the device (Fig. 1, item 501).

9. Moriyama fails to specify that the polarity of the data voltages is inverted in every set of two horizontal synchronizing periods (the 2-H dot inversion method).

10. Hirobumi teaches that the polarity of the data voltages (Drawing 4, last waveform shown) is inverted in every set of two horizontal synchronizing periods (Drawing 4, item 2H) (the 2-H dot inversion method).

11. It would have been obvious to one with ordinary skill in the art at the time the invention was made to invert the data voltages every set of two horizontal synchronizing periods (the 2-H dot inversion method) as taught by Hirobumi with the display device of Moriyama because inverting the data voltage twice every horizontal synchronizing period ensures better charging results with the LCD (Hirobumi, section [0010]).


Conclusion

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammy Pham whose telephone number is (571) 272-7773. The examiner can normally be reached on 8:00-5:30 (Mon-Fri).

13. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on (571) 272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

14. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TP
29 February 2008


Tammy Pham
Patent Examiner
Art Unit 2629


SUMATI LEFKOWITZ
SUPERVISORY PATENT EXAMINER